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AN ELECTRODE ARRANGEMENT ABSTRACT OF THE DISCLOSURE

An electrode arrangement for the plasma-aided coating of a substrate (3) with a layer of material comprising at least one first and a second material component and for the production of a plasma discharge, more especially an arc discharge (35), having an anode arrangement (5), which provides the first material component at an anode material surface (13) for evaporation, and a cathode arrangement (7), which provides the second material component at a cathode material surface (25). The electrode arrangement is characterized in that the cathode material surface (25) is constituted by an evaporation-active part (27) supporting the plasma discharge (35) and an evaporation-inactive part (41) not supporting the plasma discharge. Preferably, a motion-producing means (49) is provided for moving the evaporation-inactive part (41) over the cathode material surface (25) in order to reduce deposit of material due to the first material component on the cathode material surface (25).